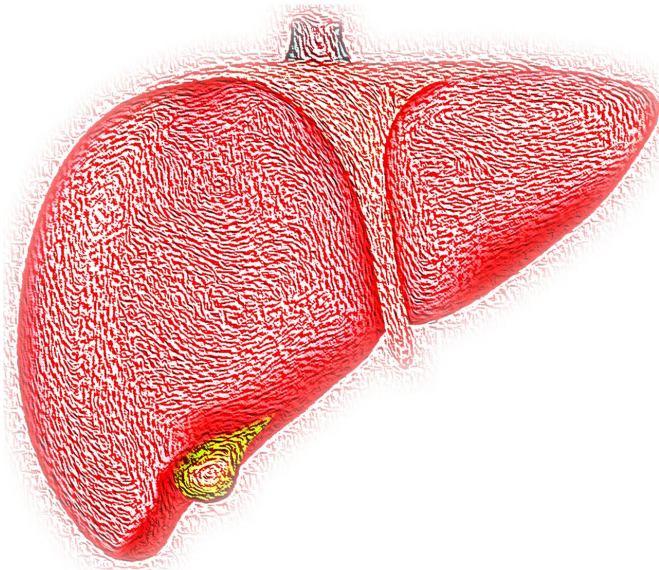


# According to a new study, testosterone therapy may reduce non-alcoholic fatty liver disease in obese

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According to a new study, testosterone therapy may reduce non-alcoholic fatty liver disease in obese men with functional hypogonadism and type-2 diabetes.

Testosterone [therapy](#) may help obese men with functional hypogonadism and type-2 diabetes reduce the prevalence of [non-alcoholic fatty liver disease](#) (NAFLD), according to a study being presented at the 23rd European Congress of Endocrinology (e-ECE 2021), on Tuesday 25 May 2021. The two-year study found that therapy with testosterone undecanoate normalized [testosterone levels](#), reduced NAFLD, and suppressed the symptoms of hypogonadism in men living with these conditions.

NAFLD is emerging as a public health issue worldwide. It is estimated that prevalent cases will increase 21% by 2030, from 83.1 million to 100.9 million. NAFLD is more commonly found in people with type-2 diabetes, and is linked to obesity, insulin resistance and atherogenic dyslipidemia. NAFLD refers to excess fat accumulation in the [liver](#), in the absence of excessive alcohol consumption. Alcohol consumption of less than 30 g (3.75 units) per day for men is used as the cut-off to diagnose NAFLD. As an increasing global health issue, this study and its findings may be a promising area for further research.

Dr. Kristina Groti Antonic and her team from the University of Ljubljana, Slovenia, carried out a large study on the effects of [testosterone therapy](#) on glycemic control, metabolic parameters, vascular function and morphology in obese men with hypogonadism and type-2 diabetes mellitus. They presented a part of this study at e-ECE 2021 in which they evaluated the effects of testosterone therapy on morphology and grade of NAFLD in this population. The two-year clinical trial saw 55 males with functional hypogonadism and type-2 diabetes participate. The first year focused on a double blind, placebo-controlled study and the following year was used for follow-up.

During the study, the participants were randomized into two groups. The first group received testosterone undecanoate during both years of the study, while the second group received a placebo in the first year and testosterone therapy in the second year. A range of tests including testosterone levels, prostate specific antigen and routine blood tests were assessed at the beginning of the trial, 12 and 24 months. Liver ultrasounds for NAFLD grade assessments were performed at the beginning and after two years, which showed an improvement in NAFLD grades after two years of

the trial.

Dr. Kristina Groti Antonic shared that, "improvement of NAFLD grade was a result of improved insulin resistance, reduction in body mass index and body weight, along with changes in body composition. As we know, testosterone increases lean body mass at the expense of fat mass, either alone or in combination with behavioral and lifestyle modifications. Testosterone with its anti-inflammatory effects also reduced chronic inflammatory state in the liver. Our study shows that testosterone therapy could be used as a suitable therapy for obese men living with non-alcoholic fatty liver disease, and therefore the findings can be used to tackle this growing pandemic."

This knowledge could help [obese men](#) living with functional hypogonadism and [type-2 diabetes](#) experience normalized [testosterone](#) levels and reduced prevalence of non-alcoholic fatty liver disease.

**More information:** Abstract 481: Effects of testosterone therapy on morphology and grade of NAFLD in obese men with functional hypogonadism and type 2 diabetes, <http://www.ece2021.org>

Provided by European Society of Endocrinology

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